

P.18 Alternative Field Methods to Treat Mercury in Soil

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Abstract

The U.S. Department of Energy (DOE), National Energy Technology Laboratory (NETL), has awarded to IT Corporation, Knoxville, Tenn., a contract for “Alternative Field Methods to Treat Mercury in Soil” (DE-RA26-01NT41030). The contract is for identifying and demonstrating remedial methods to clean up mercury-contaminated soil using proven treatment chemistries at the Oak Ridge, Tennessee Y-12 National Security Complex, at the offsite David Witherspoon properties, and at other similarly contaminated sites.

DOE used large quantities of mercury in the uranium separating process from the 1950s until the late 1980s in support of national defense. Some of this mercury found its way into, and under, several buildings and grounds outside the processing buildings at the Y-12 Plant and into some of the surface waters. Some of these areas have been determined to be potential health or environmental risks and must be dealt with under current environmental regulations.

This contract award will help determine an acceptable method to treat the contaminated soil. Testing will initially be conducted at a laboratory scale, with treatment amounts ranging in size from ounces to 10 pounds. If this method is selected for further use by DOE, work will continue in the field to treat many tons of contaminated soil. The primary contract objectives are (1) to safely retrieve and test samples of contaminated soil in a certified laboratory, (2) to determine an acceptable treatment method to ensure that the mercury does not leach from the soil, and (3) to demonstrate that the method can be used in the field. The third objective will be performed at DOE’s Y-12 Plant or at their offsite properties, and all work will be safely performed under strict procedures to protect the health of workers and the public and to protect the environment.

IT Corporation (IT) is one of the nation’s leaders in the cleanup of contaminated sites. With headquarters in Pittsburgh, Pa., it is a 7,000-person firm with annual revenues over \$1.3 billion. IT will start project planning immediately and will be supported by Nuclear Fuel Services Inc. (NFS), the country’s leading provider of mercury treatment systems for radioactively contaminated soils.